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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,392	12/12/2001	Brian K. Dewey	14917.415US01/MS164055.1	2633

27488 7590 12/28/2007

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EXAMINER	
TRUONG, CAM Y T	

ART UNIT	PAPER NUMBER
2162	

MAIL DATE	DELIVERY MODE
12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/021,392	DEWEY ET AL.	
	Examiner	Art Unit	
	Cam Y T. Truong	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2007*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-11,13,14,16,18-20 and 32-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6-11, 13-14 16, 18-20, 32-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/19/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-4, 6-11, 13-14 16, 18-20, 32-41 are pending in this Office Action.

Response to Arguments

2. Applicant's arguments with respect to claims 1-4, 6-11, 13-14 16, 18-20, 32-41 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argued that Bly does not teach the claimed limitation "each timestamp corresponding to a shadow volume".

In response to applicant's argument, examiner rejects claims in new ground and addresses this limitation in this office action.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claims 20 and 41 fail to place the invention squarely within one statutory class of invention. On page 10, lines 1-11 of the instant specification, applicant has provided evidence that applicant intends the "medium" to include signals. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore this claim(s) is/are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefor not a composition of matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 2, 4, 9, 13, 14, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen (US 6611850) in view of Musante et al (or hereinafter "Musante") (US 7054890).

As to claim 1, shen teaches the claimed limitations:

"receiving a request directed to locating at least one version of a selected file," as shown in fig. 1, a computer or a desktop PC having a interface to receive a request directed to locating of one version of a selected file. The computer or desktop PC is represented as the local client (col. 11, lines 35-41; col. 12, lines 1-15),

"the selected file being one of a plurality of files contained within a logical volume in a distributed file system" as (col. 11, lines 35-41; col. 12, lines 1-15);

"automatically obtaining a set of data corresponding to at least one prior version of that selected file that may be maintained such that its data is accessible" as the backup/restore execution control unit 214 will, basing on the restore execution information received, read in the backup file from the backup

file hard disk 110 as file server and using that backup file copy restore the thisfile.dol file to the original file hard disk 108. If the selection is to allow to overwrite the current file in the orginal file hard disk 108 with the restored file, then it will copy the file thisfile.doc.1997.07.01.15.30 as thisfile.doc and overwrite the existing file thisfile.doc. The above information shows that the thisfile.doc.1997.07.01.15.30 as a set of data corresponding a prior version of the selected file that is maintained (col. 20, lines 1-20);

"returning information corresponding to the set of data in response to the request" as the backup/restore execution control unit 214 will, basing on the restore execution information received, read in the backup file from the backup file hard disk 110 as file server and using that backup file copy restore the thisfile.dol file to the original file hard disk 108. If the selection is to allow to overwrite the current file in the original file hard disk 108 with the restored file, then it will copy the file thisfile.doc.1997.07.01.15.30 as thisfile.doc and overwrite the existing file thisfile.doc. The above information shows that the file server corresponding to the request by returning the thisfile.doc.1997.07.01.15.30 as a set of data corresponding a prior version of the selected file that is maintained. This (col. 20, lines 1-20).

"wherein returning information corresponding to the set of data in response to the request comprise returning a set of timestamps" as (fig. 9, col. 19, lines 10-45);

"and includes a copy of each of the plurality of files associated with the logical volume" as (fig. 5).

such that each timestamp is associated with the plurality of files" as (col. 2, lines 58-65).

Chen does not teach the claimed limitation "corresponding to shadow volumes, wherein each shadow volume is a point in time copy of the logical volume wherein each timestamp is associated with one of the plurality of shadow volumes,"

Musante teaches data image volume set contains a volume pair, including the original logical volume (the master volume) and the point-in-time copy of the original (the shadow volume), and a volume used to store a bitmap that tracks the differences between the master and shadow volumes. Once the data image volume pair is established, the master and shadow volumes can be accessed independently. Each point-in-time of copy of the logical volume is represented as timestamp for a shadow volume (col. 4, lines 47-65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Musanta's teaching of data image volume set contains a volume pair, including the original logical volume (the master volume) and the point-in-time copy of the original (the shadow volume), and a volume used to store a bitmap that tracks the differences between the master and shadow volumes. Once the data image volume pair is established, the master and shadow volumes can be accessed independently to Shen's system in order to search/restore a batch of files of

a logical volume in point-in-time quickly and further to keep track changes of a logical volume in a specific time easily by using shadow volumes.

As to claim 2, Shen teaches the claimed limitation "wherein the request is received from a user interface" as (fig. 9).

As to claim 4, Shen and Musante teach the claimed limitation subject matter in claim 1, Musante further teaches "wherein the request is received via an application programming interface call" API (col. 4, lines 15-20)

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Musante's teaching of API to Bly's system in order to provide access to files stored in a remote server.

As to claim 9, Shen teaches the claimed limitation "wherein automatically obtaining a set o data comprises, requesting attributes for each prior version of the selected file or folder that may be maintained" as (col. 23, lines 1-40).

As to claim 13, Shen teaches the claimed limitation "displaying information corresponding to the set to enable user selection of a timestamp-identified shadow volume" as (col. 19, lines 45-67; col. 20, lines 1-5).

As to claim 14, Shen teaches the claimed limitation "requesting the set of timestamps and further embedding a timestamp corresponding to a selected file on a shadow volume in a request to access the selected file or file attributes from the respective shadow volume" as (col. 19, lines 45-67; col. 20, lines 1-5)

As to claim 19, Shen teaches the claimed limitation "receiving a second request directed to restoring a selected file version in the set, and accessing the selected file version in response to the request" as (col. 20, lines 5-25).

As to claim 20, Shen teaches the same claimed limitation subject matter in claim 1.

6. Claims 1, 2, 4, 9, 13-14, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al (or hereinafter "Bly") (USP 5008853) in view of Musante et al (or hereinafter "Musante") (US 7054890).

As to claim 1, Bly teaches the claimed limitations:

"receiving an request directed to locating at least one version of a selected file " as the shared structured data objects, which are located in a remote digital storage facility or file service represented as a file drawer abstraction of the desktop, are accessed by users to place a digital copy of a digital copy of a structured data object on the user's desktop for subsequent manipulation, editing, revision, insertion of new material. This information indicates that the remote

digital storage facility has to receive a request to place a digital copy of a structured data object on the user's desktop. A digital copy of a structured data object is represented as a selected file (col. 3, lines 60-67);

"the selected file being one of a plurality of files contained within a logical volume in a distributed file system" as (col. 3, lines 60-67);

"automatically obtaining a set of data corresponding to at least one prior version of that selected file that may be maintained such that its data is accessible" as fig. 12 displays a list of different versions (previous version and updated version) of each entry. These versions are stored in a folder 102. Users can copies all of these versions of entries from folder 102 to book 40. It means that a user can copies each previous version or prior version of each entry to the book 40. Thus, a user can select a previous version of an entry and invokes the show detail component symbol 45 in header 41 of shard book window 42 shown in fig. 2. When a user selects the previous version of the entry, the system will automatically contain a set of properties corresponding to previous version of the entry such as the displaying detail properties of updated version of the entry in fig. 5&6. The previous version of the entry is maintained to create the updated version. Copying the previous version of the entry to book 40 indicates that the set of properties corresponding to the previous version of the entry is accessible (col. 19, lines 56-63; col. 20, lines 60-68; col. 37, lines 7-10);

"returning information corresponding to the set of data in response to the request, wherein returning information corresponding to the set of data in

response to the request comprises returning a set of timestamps corresponding to shadow volumes, such that each timestamp is associated with the plurality of files " as when a user selects a shared book entry, the system displays all versions of entry details sheet 60A including timestamps corresponding to folders. These folders are copies of folders from a remote server. Thus, these folders are represented as these shadow volumes. These folders are shadow volumes (figs. 2&5; col. 20, lines 60-67; col. 28, lines 30-55).

Bly does not explicitly teach the claimed limitation "wherein each shadow volume is a point in time copy of the logical volume and includes a copy of each of the plurality of files associated with the logical volume, wherein each timestamp is associated with one of the plurality of shadow volumes".

Musante teaches data image volume set contains a volume pair, including the original logical volume (the master volume) and the point-in-time copy of the original (the shadow volume), and a volume used to store a bitmap that tracks the differences between the master and shadow volumes. Once the data image volume pair is established, the master and shadow volumes can be accessed independently. Each point-in-time of copy of the logical volume is represented as timestamp for a shadow volume (col. 4, lines 47-65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Musanta's teaching of data image volume set contains a volume pair, including the original logical volume (the master volume) and the point-in-time copy of the original (the shadow volume), and a volume used to store

a bitmap that tracks the differences between the master and shadow volumes. Once the data image volume pair is established, the master and shadow volumes can be accessed independently to Shen's system in order to search/restore a batch of files of a logical volume in point-in-time quickly and further to keep track changes of a logical volume in a specific time easily by using shadow volumes.

As to claim 2, Bly teaches the claimed limitation "wherein the request is received from a user interface" as (col. 9, lines 30-40).

As to claim 4, Bly and Musante teach the claimed limitation subject matter in claim 1, Musante further teaches "wherein the request is received via an application programming interface call" API (col. 4, lines 15-20)

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Musante's teaching of API to Bly's system in order to provide access to files stored in a remote server.

As to claim 9, Bly teaches the claimed limitation "requesting attributes for each prior version of the selected file or folder that may be maintained" as (figs. 13-15).

As to claim 13, Bly teaches the claimed limitation "displaying information corresponding to the set to enable user selection of a timestamp-identified shadow volume" as (fig. 2).

As to claim 14, Bly teaches the claimed limitation "requesting the set of timestamps, and further comprising, embedding a timestamp corresponding to a selected file on a shadow volume in a request to access the selected file or file attributes from that respective shadow volume" as (figs. 2-4, col. 23, lines 5-20).

As to claim 19, Bly teaches the claimed limitation "receiving a second request directed to restoring a selected file version in the set, and accessing the selected file version in response to the request" as (col. 37, lines 50-67).

As to claim 20, Bly teaches the same claimed limitation subject matter in claim 1.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shen in view of Musante et al (or hereinafter "Musante") (US 7054890) and further in view of Sherman (USP 5832508).

As to claim 3, Shen discloses the claimed limitation subject matter in claim 1, except the claimed limitation "an operating system shell user interface".

Sherman teaches a graphical user interface shell 145 on an operating system (fig. 1B, col. 6, lines 25-30).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sherman's teaching of Shell interface into Shen's system in order to allow a user to enter operating system commands on the service provider's system through a command-line interface.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al (or hereinafter "Bly") (USP 5008853) in view of Musante et al (or hereinafter "Musante") (US 7054890) and further in view of Sherman (USP 5832508).

As to claim 3, Bly discloses the claimed limitation subject matter in claim 1, except the claimed limitation "an operating system shell user interface". Sherman teaches a graphical user interface shell 145 on an operating system (fig. 1B, col. 6, lines 25-30).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sherman's teaching of Shell interface into Bly's system in order to allow a user to enter operating system commands on the service provider's system through a command-line interface.

9. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bly in view of Musante and further in view of Morris (US 5634052).

As to claim 6, Bly does not explicitly teach the claimed limitation "wherein the shadow volumes are maintained as differential files".

Morris teaches delta files (col. 8, lines 20-40).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Morris's teaching of delta files Bly's system in order to provide a system for utilizing differencing as a means for reducing the network transmission cost, and reducing the storage requirement in the backup subsystem of a client-server system.

As to claim 7, Bly teaches the claimed limitation "wherein the shadow volumes are maintained on at least one remote server" as (col. 18, lines 10-25).

10. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen in view of Musante and further in view of Morris (US 5634052).

As to claim 6, Shen does not explicitly teach the claimed limitation "wherein the shadow volumes are maintained as differential files".

Morris teaches delta files (col. 8, lines 20-40).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Morris's teaching of delta files Shen's system in order to provide a system for utilizing differencing as a means for reducing the network transmission cost, and reducing the storage requirement in the backup subsystem of a client-server system.

As to claim 7, Shen teaches the claimed limitation "wherein the shadow volumes are maintained on at least one remote server" as (fig. 9; col. 11, lines 10-40).

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly in view of Musante and further in view of Morris and Harrison et al (or hereinafter "Harrison").

As to claim 8, Bly does not teach the claimed limitation "wherein communication with the remote server is via a CIFS file access protocol". Harrison teaches Microsoft compatible format (Server Message Block or SMB/Common Internet File System or CIFS). Finally, to enable network storage device 15 to communicate over the network, a Network TCP/IP Protocol (col. 4, lines 45-50).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Harrison's Microsoft compatible format (Server Message Block or SMB/Common Internet File System or CIFS). Finally, to enable network storage device 15 to communicate over the network, a Network TCP/IP Protocol into Bly's system in order to allow users to communicate with server via network system.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shen in view of Musante and further in view of Morris and Harrison et al (or hereinafter "Harrison").

As to claim 8, Shen does not teach the claimed limitation "wherein communication with the remote server is via a CIFS file access protocol". Harrison teaches Microsoft compatible format (Server Message Block or SMB/Common Internet File System or CIFS). Finally, to enable network storage device 15 to communicate over the network, a Network TCP/IP Protocol (col. 4, lines 45-50).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Harrison's Microsoft compatible format (Server Message Block or SMB/Common Internet File System or CIFS). Finally, to enable network storage device 15 to communicate over the network, a Network TCP/IP Protocol into Bly's system in order to allow users to communicate with server via network system.

13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shen in view of Musante and further in view of Almond et al (or hereinafter "Almond") (USP 6112024).

As to claim 10, Shen discloses the claimed limitation subject matter in claim 1, except the claimed limitation "filtering any information indicative of a prior version that does not exist".

Almond teaches that when a user, using a particular version, issues a query to delete a record, the version control subsystem 11 enables the DBMS 12 to determine whether the row 20(i) containing the record version associated with the version is also associated with other versions higher in the version hierarchy. In that operation, the DBMS 12 can determine whether the row 20(i) contains, in the version identifier field 22, the version identifier for the particular version. If so, the DBMS 12 will set the deleted flag 26 for the row 20(i), thereby to indicate that the record has been deleted. On the other hand, if the DBMS 12 determines that the row 20(i) does not contain, in the version identifier field 22, the version identifier for the particular version, which may be the case if the record has not been created or updated in that version, it will create a new record version for the version for which the record is to be deleted, in the manner described above, and sets the delete flag 26 in that record version. The DBMS is represented as a filter flag 26 to indicate the record has been deleted. When record has been deleted, this means that the prior version of record has been deleted too (col. 12, lines 1-20).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Almond's teaching of after filtering the version identifier for the particular version, DBMS 12 will set the deleted flag 26

for the row 20(i), thereby to indicate that the record has been deleted to Shen's system in order to let a user know the file does not exist.

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al (or hereinafter "Bly") (USP 5008853) in view of Musante and further in view of Almond et al (or hereinafter "Almond") (USP 6112024).

As to claim 10, Bly discloses the claimed limitation subject matter in claim 1, except the claimed limitation "filtering any information indicative of a prior version that does not exist".

Almond teaches that when a user, using a particular version, issues a query to delete a record, the version control subsystem 11 enables the DBMS 12 to determine whether the row 20(i) containing the record version associated with the version is also associated with other versions higher in the version hierarchy. In that operation, the DBMS 12 can determine whether the row 20(i) contains, in the version identifier field 22, the version identifier for the particular version. If so, the DBMS 12 will set the deleted flag 26 for the row 20(i), thereby to indicate that the record has been deleted. On the other hand, if the DBMS 12 determines that the row 20(i) does not contain, in the version identifier field 22, the version identifier for the particular version, which may be the case if the record has not been created or updated in that version, it will create a new record version for the version for which the record is to be deleted, in the manner described above, and sets the delete flag 26 in that record version. The DBMS is represented as a

filter flag 26 to indicate the record has been deleted. When record has been deleted, this means that the prior version of record has been deleted too (col. 12, lines 1-20).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Almond's teaching of after filtering the version identifier for the particular version, DBMS 12 will set the deleted flag 26 for the row 20(i), thereby to indicate that the record has been deleted to Bly's system in order to let a user know the file does not exist.

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shen in view of Musante and further in view of Vasudevan et al (or hereinafter "Vasudevan") (USP 6598059).

As to claim 11, Shen does not teach the claimed limitation "filtering information indicative of a prior version that is not unique with respect to a prior version already represented in the set". Vasudevan teaches filtering record version that includes duplicate versions (col. 9, lines 45-55; col. 18, lines 1-25). It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Vasudevan's teaching of filtering record version that includes duplicate versions to Shen's system in order to save time a user to search/retrieve records having duplicated versions.

16. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al (or hereinafter "Bly") (USP 5008853) in view of Musante and further in view of Vasudevan et al (or hereinafter "Vasudevan") (USP 6598059).

As to claim 11, Bly does not teach the claimed limitation "filtering information indicative of a prior version that is not unique with respect to a prior version already represented in the set". Vasudevan teaches filtering record version that includes duplicate versions (col. 9, lines 45-55; col. 18, lines 1-25). It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Vasudevan's teaching of filtering record version that includes duplicate versions to Bly's system in order to save time a user to search/retrieve records having duplicated versions.

17. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shen in view of Musante and further in view of Trede et al (or hereinafter "Trede") (USP 5873103).

As to claim 16, Shen does not teach the claimed limitation "wherein timestamp corresponding to the selected file is embedded in the request such that distributed file system server name changes at distributed file system -junction points do not affect the time stamp". Trede teaches that the name of the storage server is an inadequate identifier, since the name can be changed over time. Since the name of server can be changed. However, the system does not mention whether or not the change of server name can affect the

timestamp. Thus, the change of server name may not affect the time stampe (col. 11, lines 1-15).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Trede's teaching of the name of the storage server is an inadequate identifier, since the name can be changed over time to Shen's system in order to save time for processing an attribute of a file.

18. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al (or hereinafter "Bly") (USP 5008853) in view of Musante and further in view of Trede et al (or hereinafter "Trede") (USP 5873103).

As to claim 16, Bly does not teach the claimed limitation "wherein the timestamp corresponding to the selected file is embedded in the request such that distributed file system server name changes at distributed file system -junction points do not affect the timestamp". Trede teaches that the name of the storage server is an inadequate identifier, since the name can be changed over time. Since the name of server can be changed. However, the system does not mention whether or not the change of server name can affect the timestamp. Thus, the change of server name may not affect the time same (col. 11, lines 1-15).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Trede's teaching of the name of the storage

server is an inadequate identifier, since the name can be changed over time to Bly's system in order to save time for processing an attribute of a file.

19. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shen in view of Musante and further in view of Martin, Jr. et al (or hereinafter "Martin") (USP 6610105).

As to claim 18, Shen does not teach the claimed limitation "requesting the set of timestamps, and further comprising, flagging a request to access the selected file or file attributes from that respective shadow volume to indicate that the request corresponds to a shadow volume". However, Martin teaches that the exact access to the right file is dependent on a flag in the request as an example shown in FIG. 4A. A request from the mobile device, if executing a WML browser, comprises a flag "wml" so that the menu generation server can be advised of which file shall be fetched (col. 11, lines 55-65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Martin's teaching of access to the right file is dependent on a flag in the request to Shen's system in order to let the system known user can access the file.

20. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly in view of Musante and further in view of Martin, Jr. et al (or hereinafter "Martin") (USP 6610105).

As to claim 18, Bly teaches "requesting the set of timestamps" as (fig. 2).

Bly does not teach the claimed limitation "flagging a request to access the selected file or file attributes from that respective shadow volume to indicate that the request corresponds to a shadow volume". However, Martin teaches that the exact access to the right file is dependent on a flag in the request as an example shown in FIG. 4A. A request from the mobile device, if executing a WML browser, comprises a flag "wml" so that the menu generation server can be advised of which file shall be fetched (col. 11, lines 55-65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Martin's teaching of access to the right file is dependent on a flag in the request to Bly's system in order to let the system known user can access the file.

21. Claims 32-36 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al (or hereinafter "Bly") (USP 5008853) in view of Musante et al (or hereinafter "Musante") (US 7054890) and Morris (US 5634052).

As to claim 32, Bly teaches the claimed limitations:

"receiving a request to locate information corresponding to prior versions of a file or folder" as the shared structured data objects, which are located in a remote digital storage facility or file service represented as a file drawer abstraction of the desktop, are accessed by users to place a digital copy of a

digital copy of a structured data object on the user's desktop for subsequent manipulation, editing, revision, insertion of new material. This information indicates that the remote digital storage facility has to receive a request to place a digital copy of a structured data object on the user's desktop. A digital copy of a structured data object is represented as a selected file (col. 3, lines 60-67);

"in response to the request, obtaining a set of at least one timestamp" as (fig. 12);

"for each timestamp in the set, requesting file or folder attributes from the corresponding volume" as (col. 29, lines 1-25).

"developing a list based on each response to the request for file or folder attributes, each entry in the list indicative of the accessibility of the file or folder associated with each entry" as (fig. 12, col. 37, lines 7-11);

"providing prior file or folder version information and accessibility of the prior file or folder versions based on the list in response to the request to locate information, such that the information enable retrieval of a corresponding version of a file or folder in the list" as fig. 12 displays a list of different versions (previous version and updated version) of each entry. These versions are stored in a folder 102. Users can copies all of these versions of entries from folder 102 to book 40. It means that a user can copies each previous version or prior version of each entry to the book 40. Thus, a user can select a previous version of an entry and invokes the show detail component symbol 45 in header 41 of shard book window 42 shown in fig. 2.. When a user selects the previous version of the entry, the system will automatically

contain a set of properties corresponding to previous version of the entry such as the displaying detail properties of updated version of the entry in fig. 5&6. The previous version of the entry is maintained to create the updated version. Copying the previous version of the entry to book 40 indicates that the set of properties corresponding to the previous version of the entry is accessible (col. 19, lines 56-63; col. 20, lines 60-68; col. 37, lines 7-10);

"wherein selection of a prior version of the file replaces the most current version of the file" as a check is made to determine if a local cache of the entry exists and, if not, the current version of the entry is obtained from the remote file service. On the other hand, if a copy of the entry exists at the local instance of the shared book, then a check is made to determine if the local instance is up-to-date, i.e., if the version at the remote file service has a later creation date than the locally cached version. If true, then the implementation will have the copy of the more recent version on the remote file service replace the local copy of the entry. This functioning is indicated by box 122 in FIG. 14 (col. 25, lines 10-30).

Bly does not explicitly teach the claimed limitation "each timestamp corresponding to a shadow volume that may have a prior version of the file or folder maintained therein; wherein the shadow volume includes a differential file corresponding thereto".

Musante teaches data image volume set contains a volume pair, including the original logical volume (the master volume) and the point-in-time copy of the original

(the shadow volume), and a volume used to store a bitmap that tracks the differences between the master and shadow volumes. Once the data image volume pair is established, the master and shadow volumes can be accessed independently. Each point-in-time of copy of the logical volume is represented as timestamp for a shadow volume (col. 4, lines 47-65).

Morris teaches a server stores delta files (col. 8, lines 20-40).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Musanta's teaching of data image volume set contains a volume pair, including the original logical volume (the master volume) and the point-in-time copy of the original (the shadow volume), and a volume used to store a bitmap that tracks the differences between the master and shadow volumes. Once the data image volume pair is established, the master and shadow volumes can be accessed independently and Morris's teaching data files to Shen's system in order to search/restore a batch of files of a logical volume in point-in-time quickly and further to keep track changes of a logical volume in a specific time easily by using shadow volumes.

As to claim 33, By teaches the claimed limitation "wherein receiving a request to locate information comprises receiving an API call" as (col. 29, lines 1-15)

As to claim 34, Bly teaches the claimed limitation "wherein obtaining a set of at least one timestamp comprises communicating with at least one remote file

server having at least one shadow volume thereon" as (fig. 12, col. 29, lines 1-15).

As to claim 35, Bly teaches the claimed limitation "wherein requesting file or folder attributes from the corresponding volume comprises, identifying the shadow volume via its corresponding timestamp in the request" as (fig. 12, col. 26, lines 1-30).

As to claim 36, Bly teaches the claimed limitation "embedding the timestamp in a path provided to the remote file server" as (fig. 4).

As to claim 41, Bly teaches the same claimed limitation subject matter in claim 32, further teaches " a computer-readable medium having computer-executable instructions for performing (col. 15, lines 15-20).

22. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al (or hereinafter "Bly") (USP 5008853) in view of in view of Musante et al (or hereinafter "Musante") (US 7054890) and Morris (US 5634052) and further in view of Trede et al (or hereinafter "Trede") (USP 5873103).

As to claim 37, Bly does not teach the claimed limitation "wherein the timestamp is embedded in the path such that distributed file system server name changes at distributed file system junction points do not affect the timestamp".

Trede teaches that the name of the storage server is an inadequate identifier, since the name can be changed over time. Since the name of server can be changed. However, the system does not mention whether or not the change of server name can affect the timestamp. Thus, the change of server name may not affect the time same (col. 11, lines 1-15).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Trede's teaching of the name of the storage server is an inadequate identifier, since the name can be changed over time to Bly's system and Benayoun's system in order to save time for processing an attribute of a file.

23. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al (or hereinafter "Bly") (USP 5008853) in view of in view of Musante et al (or hereinafter "Musante") (US 7054890) and Morris (US 5634052) and further in view of Mason.

As to claim 38, Bly does not teach the claimed limitation "flagging the request such that the remote file server will detect the embedded timestamp". Mason teaches hen the SELECT request is received, a server subprocess will be initiated to flag and timestamp the event packet as selected and issue a BORROW or COPY request to the central library facility to cause it to borrow or copy the document of the event packet if it exists in the central library facility and transmit the document to the remote processor from which the request SELECT was received (col. 16, lines 10-20).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Mason's teaching of hen the SELECT request is received, a server subprocess will be initiated to flag and timestamp the event packet as selected and issue a BORROW or COPY request to the central library facility to cause it to borrow or copy the document of the event packet if it exists in the central library facility and transmit the document to the remote processor from which the request SELECT was received to Bly's system and Benayoun's system in order to indicate to server to select information for response to a user's request.

24. Claims 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al (or hereinafter "Bly") (USP 5008853) in view of in view of Musante et al (or hereinafter "Musante") (US 7054890) and Morris (US 5634052) and further in view of Barney et al (or hereinafter "Barney") (USP 6212512).

As to claim 39, Bly does not teach the claimed limitation " determining from the response to the request for file or folder attributes whether the file or folder exists on the shadow volume identified via a timestamp, and if so, including an entry representing the corresponding timestamp in the list". Barney teaches that the protection list editor scheduler 226 component is a standalone utility that allows the user to create and modify a profile of files on their system that they would like to have protected on a regular basis. Individual files, file types, whole folders and

sub-folders, as well as wild cared entries may be added or removed from the protection list from this component (col. 7, lines 20-35).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Barney's the protection list editor scheduler 226 component is a standalone utility that allows the user to create and modify a profile of files on their system that they would like to have protected on a regular basis. Individual files, file types, whole folders and sub-folders, as well as wild cared entries may be added or removed from the protection list from this component to Bly's system in order to return a correct list of files to a user properly.

As to claim 40, Bly and Benayouns disclose the claimed limitation subject matter in claim 32, except the claimed limitation "wherein developing a list comprises, determining from the response to the request for file or folder attributes whether a unique file or folder entry exists in the list, and if not, adding an entry representing the corresponding timestamp to the list". Barney teaches that the protection list editor scheduler 226 component is a standalone utility that allows the user to create and modify a profile of files on their system that they would like to have protected on a regular basis. Individual files, file types, whole folders and sub-folders, as well as wild cared entries may be added or removed from the protection list from this component (col. 7, lines 20-35).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Barney's the protection list editor scheduler 226 component is a standalone utility that allows the user to create and modify a profile of files on their system that they would like to have protected on a regular basis. Individual files, file types, whole folders and sub-folders, as well as wild cared entries may be added or removed from the protection list from this component to Bly's system in order to return a correct list of files to a user properly.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

St. Pierre et al (US 20020059505).

Contact Information

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T. Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Firday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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